# Overview of CPUC's Broadband Programs

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Robert Osborn
Communications Division
Broadband, Policy & Analysis Branch
California Public Utilities Commission
(916) 327-7788, robert.osborn@cpuc.ca.gov

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- California Broadband Council
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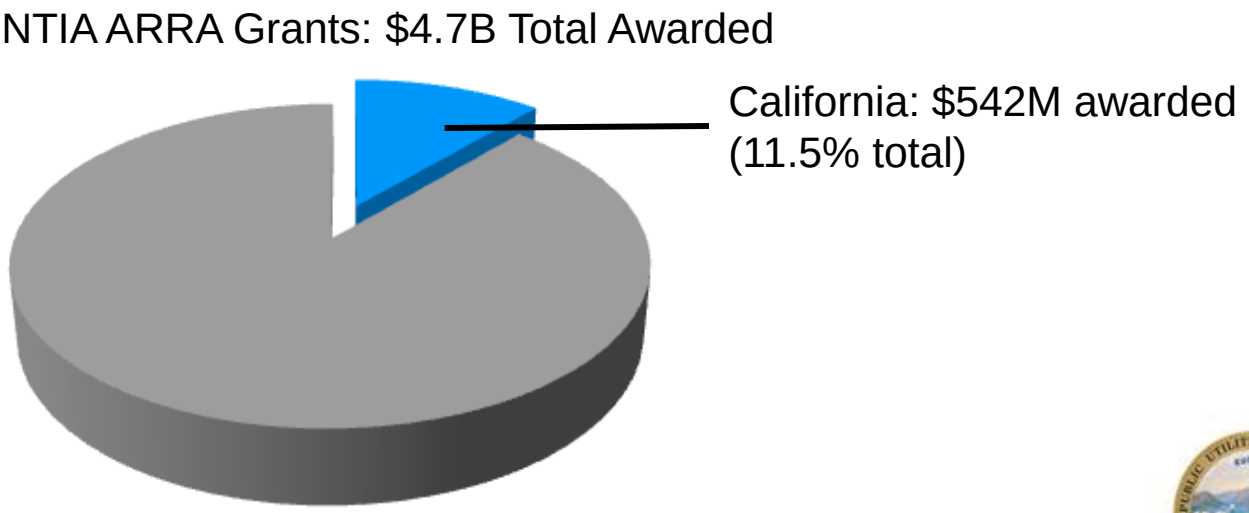
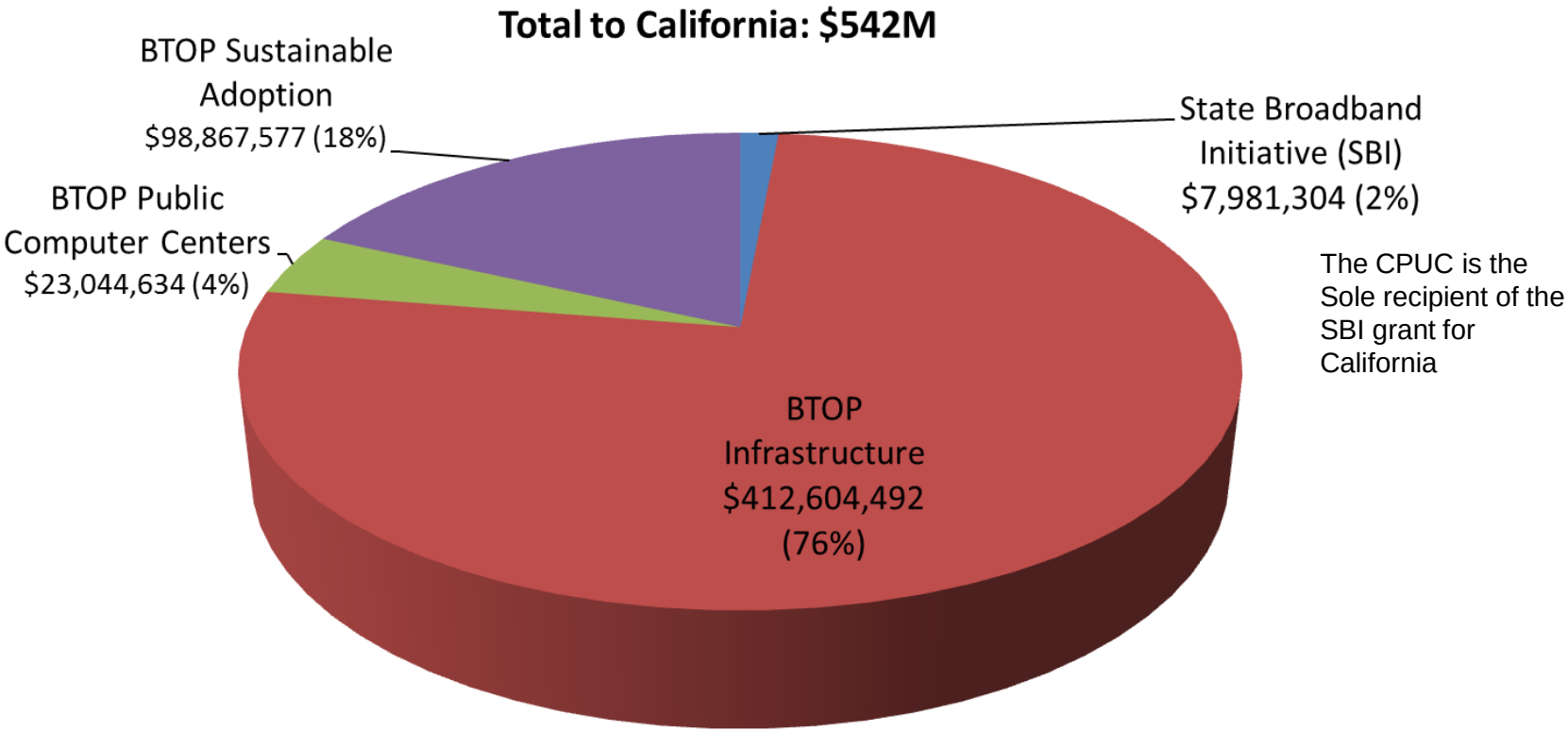
# NTIA Broadband Funding

- In 2009, Congress allocated $4.7 billion to Dep't of Commerce for broadband
- National Telecommunications and Information Administration (NTIA) awarded and administers grants through Sep. 30, 2014 for
  - Broadband deployment
  - Public computer centers
  - Adoption programs
- Two types of grant programs: BTOP and SBI



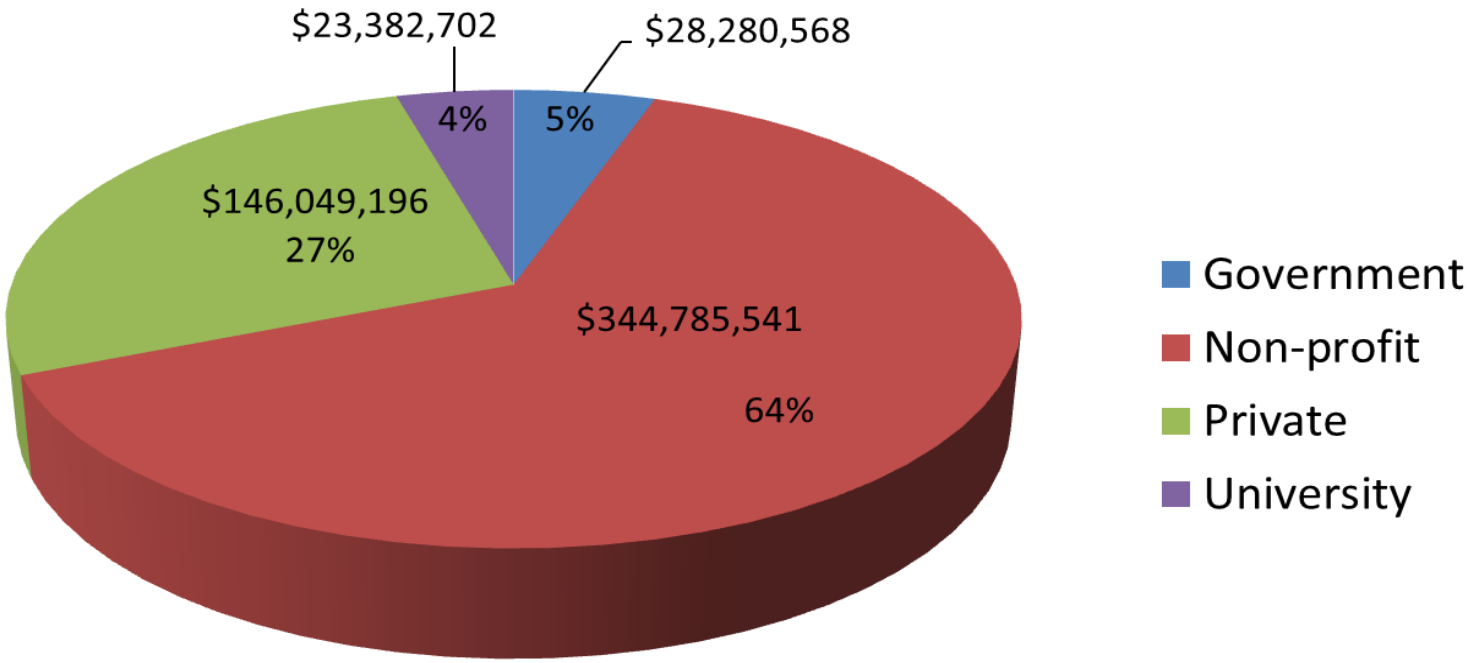
# BTOP and SBI Awards for California




The CPUC is the Sole recipient of the SBI grant for California

Source: http://www2.ntia.doc.gov/california

# California BTOP and SBI Awards by Organization Type



# Broadband Council Web Site

CALIFORNIA Broadband Council

CPUC Website | Get On Distribution List | Broadband Availability Map

HOME | COUNCIL MEMBERS | IN THE MEDIA | RESOURCES | HELPFUL LINKS

FACEBOOK TWITTER

Home

## Welcome to the California Broadband Council Website

Following the groundbreaking work by the **California Broadband Task Force**, the California Broadband Council was established by legislation in 2010 (S.B. 1462 – Padilla) to marshal the state's resources to further the objectives of increasing broadband network deployment, and eliminating the Digital Divide by expanding broadband accessibility, literacy, adoption, and usage.

- The **Council consists of 9 members**.
- **Meetings**


## Working Groups

- Identify State Buildings and Structures for Collocation
- Overcome local barriers to deployment and adoption
- State Surplus Computers
- Tribal Broadband

## Our Mission

The Council is charged with reviewing implementation of the 2008 Broadband Task Force Report recommendations and improving coordination among state agencies. The Council will help applicants to compete more effectively for federal funds made available through the National Broadband Plan, building on the $420 million in broadband infrastructure grants from the federal American Recovery and Reinvestment Act (ARRA) and the $57 million in California Advanced Services Fund grants already awarded in the state.

- **Duties**

## Resources for Internet Service Providers

**Broadband Provider Collocation Map**
**Collocation on State Facilities Videos**

# California Broadband Council

- As a continuation of the the Broadband Task Force, the Council was established by S.B. 1462 – Padilla, 2010 to
  - Marshal state's resources to increase network deployment
  - Eliminate the Digital Divide by expanding broadband accessibility, literacy, adoption, and usage
- Meets 3x per year
- Council has 9 members

# List of Members, Designees, and Staff

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Brian Kelly<br>Secretary<br>Transportation Agency | Fred Klaass<br>Director,<br>Department of General Services | Tom Torlakson<br>State Superintendant<br>California Dep't of Education | Steven Bradford<br>Assembly Member, 62nd District | Michael Peevey<br>Chair<br>President, CPUC | Alex Padilla<br>Vice Chair<br>Senator, 20th District | Sunne Wright McPeak<br>President & CEO,<br>California Emerging Technology Fund | Carlos Ramos<br>Director,<br>California Dep't Technology | Mark Ghilarducci<br>Director,<br>Office of Emergency Services |
| Ben DeAlba<br>Special Advisor | Esteban Almanza<br>Chief Deputy Director<br>Department of General Services | Craig Cheslog<br>Advisor<br>California Dep't of Education | Davina Flemings<br>Principal Consultant<br>Assembly Committee on Utilities and Commerce | Michael Morris<br>Supervisor<br>Video Franchising & Broadband Deployment | Jacqueline Kinney<br>Principal Consultant<br>Senate Committee on Energy, Utilities, and Communications | Susan Walters<br>Senior Vice President<br>California Emerging Technology Fund | Adelina Zendejas<br>Assistant Secretary<br>Broadband and Digital Literacy | |
| | | Keric Ashley<br>Director<br>Data Management Division | | Rob Osborn<br>Council Staff &<br>Sr. Policy Analyst | | | | |

Broadband Council web site:
http://broadbandcouncil.ca.gov

# Broadband Council Working Groups

## Surplus state computers

- **Background:** Senate Bill 493 (Padilla) gave DGS discretion to facilitate this disposition of surplus state computers within its existing policies and procedures. DGS' Fleet & Asset Management launched the program on Feb. 24 this year.
- **Goal:** Match school districts with computer refurbishers and facilitate the smooth flow of surplus computer equipment to be reconditioned and made available to low income households
- **Members:** representatives from DGS, CTA, CPUC, CETF, school districts and computer refurbishers

## Local barriers to deployment & adoption

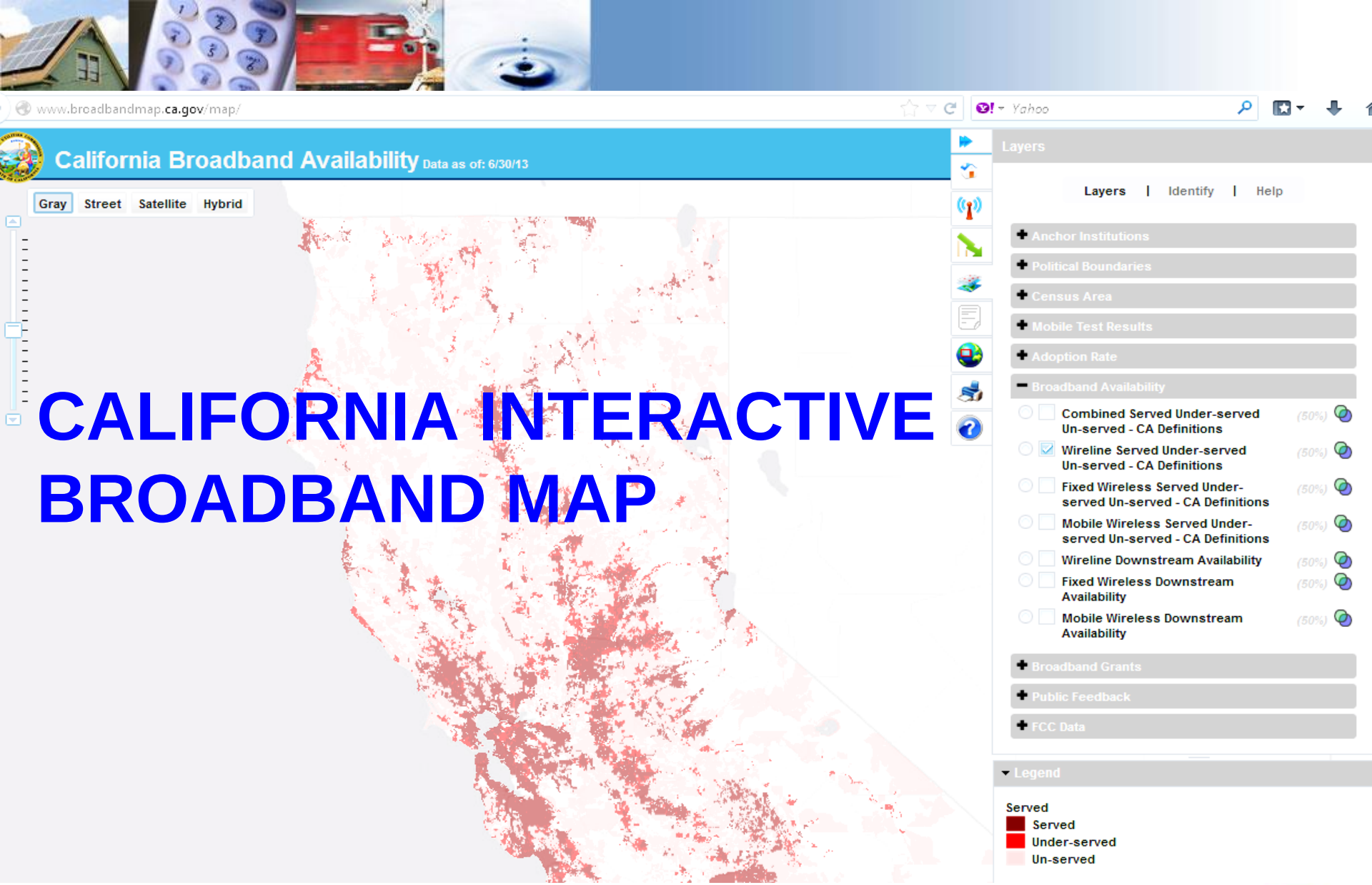
- **Background:** Local policies, ordinances and procedures can have a large impact on the ability to deploy broadband facilities
- **Goal:** Catalogue the policies, ordinances and procedures common to local jurisdictions, and to recommend solutions that will protect the interests of cities and counties, yet more effectively foster the rapid deployment of broadband facilities
- **Members:** representatives from wireless and wireline broadband providers, broadband equipment suppliers, county officials, community based organizations, CPUC and Department of Tech..

## State buildings / towers collocation

- **Background:** Governor Schwarzenegger's Executive Order S-23-06 called for state agencies to provide information so that the location of such state owned or controlled facilities could be mapped
- **Goal:** Use the information to create map layers showing these facilities, and make them available to the public as part of the State Interactive Broadband Availability Map
- **Members:** representatives from DGS, CPUC, Transportation Agency, Department of Education, Cal OES, and fixed and mobile wireless broadband providers

## Tribal broadband

- **Background:** Governor Tribal Advisor Cynthia Gomez proposed the creation of this working group because of the lack of broadband awareness among the state's 111 federally recognized tribes
- **Goal:** Meet quarterly to discuss ways to promote broadband awareness, and between meetings, assist tribes in applying for state and federal funding
- **Members:** representatives from Northern and Southern California tribes, Department of Technology, CPUC

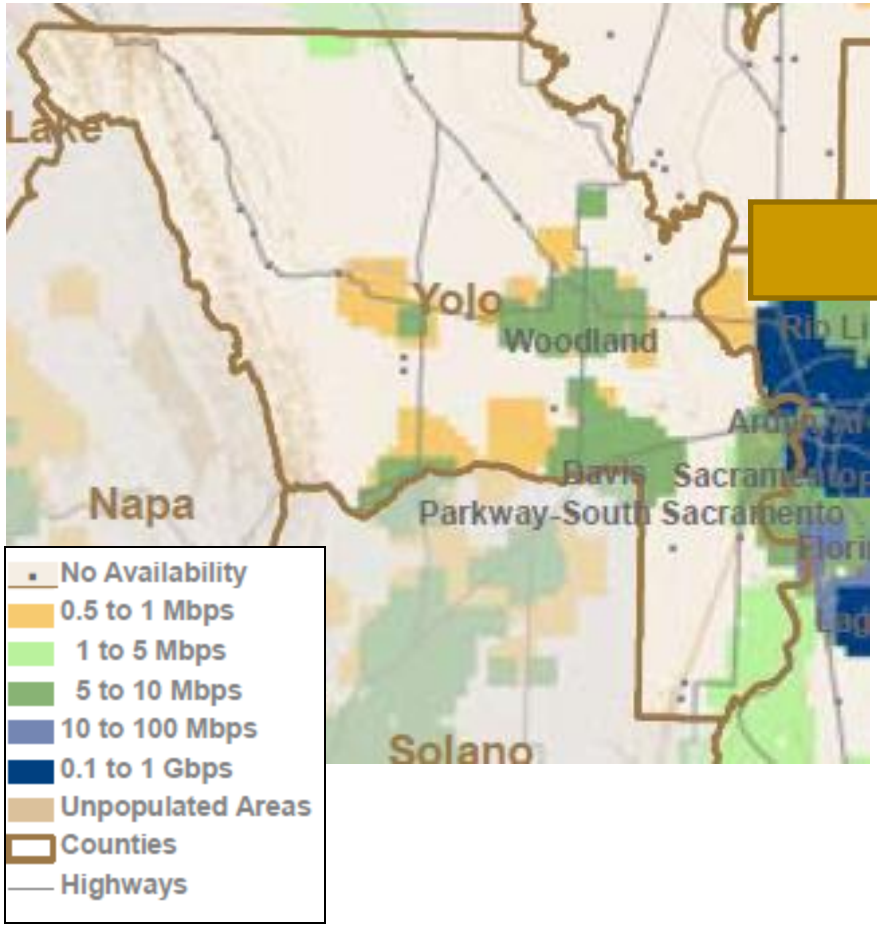



# CALIFORNIA INTERACTIVE BROADBAND MAP

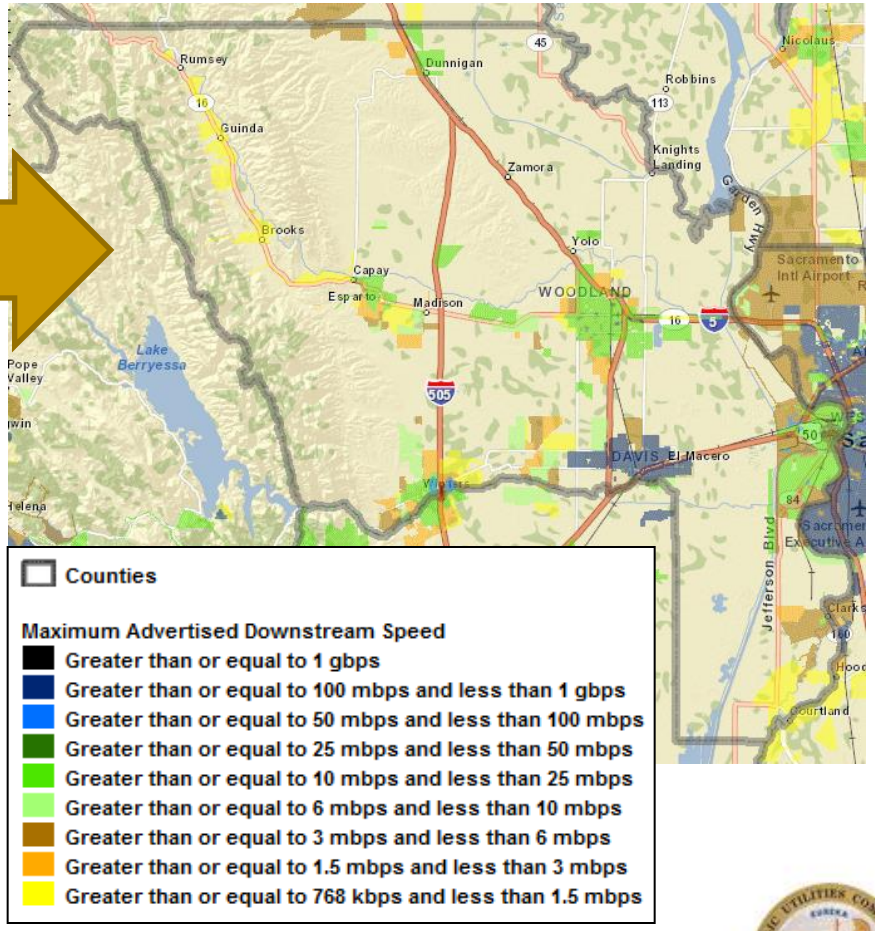
www.broadbandmap.ca.gov

# Brief History of Mapping, Then and Now

California Broadband Task Force Report – 2008
Wireline Broadband Availability



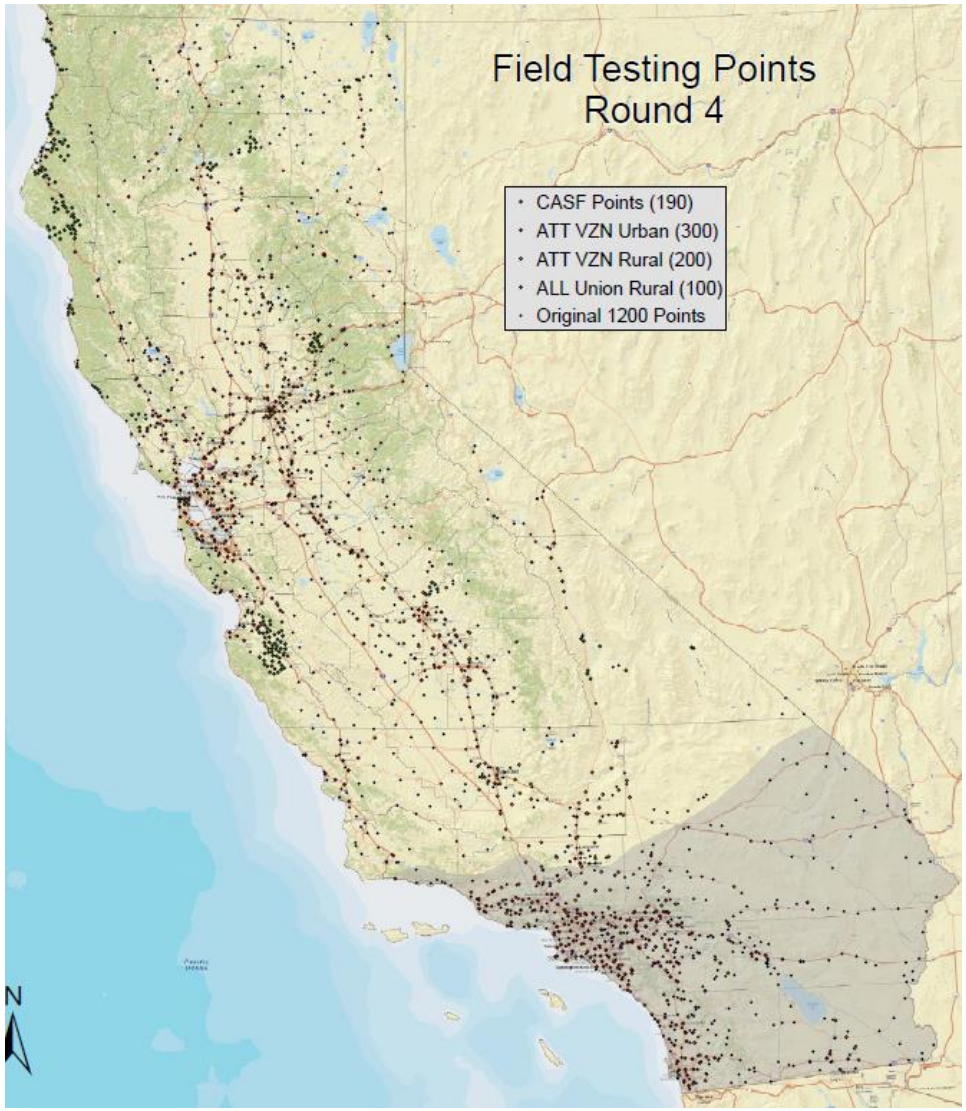

California Interactive Broadband Map – June 2012
Wireline Broadband Availability



# Broadband Data Collection

- Collect broadband data from 87 providers 2x year
  - SBI funding ends 9/30/14
  - Budget to continue program in governor's  FY14-15 budget
- Post-processed data sent to NTIA
  - FCC National Broadband Map
  - data set represents over 99% of all reported fixed internet subscriptions in California
- Data uploaded to California online map
  - Overlays include anchor institutions
  - Would like to add fire & police
  - Individual provider coverage overlays let you compare

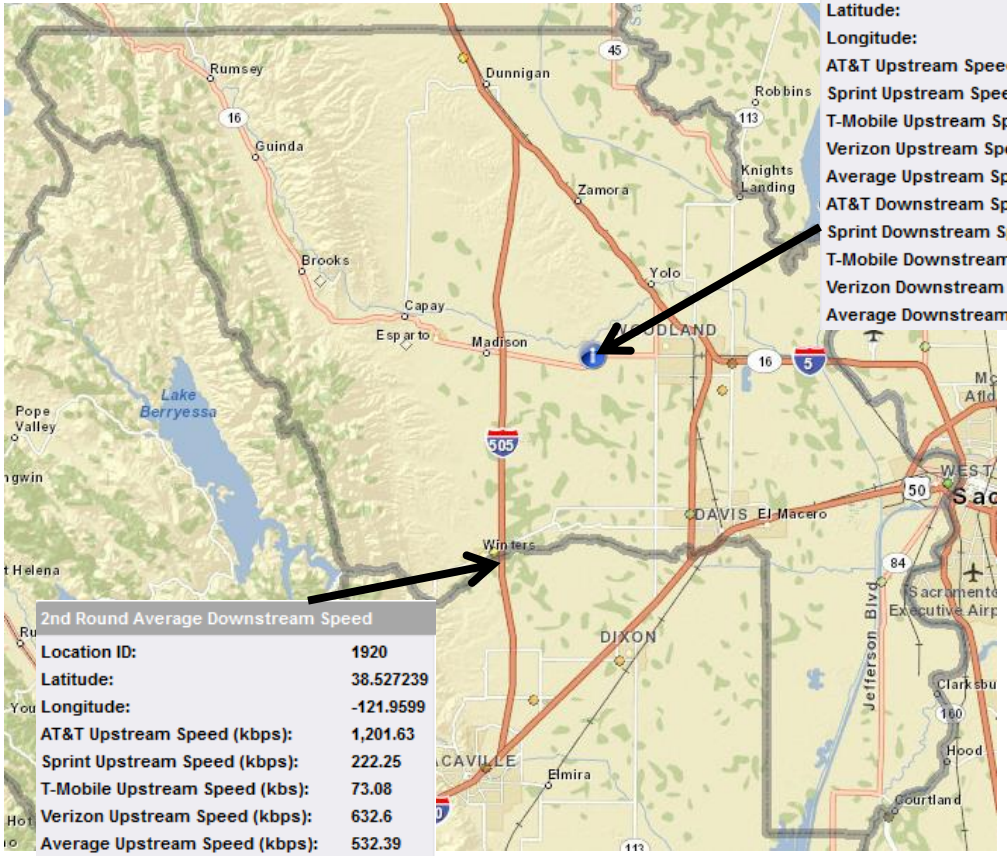
# Mobile Field Testing




Key points:

- Testing done twice a year
- 8 testers drive over 50,000 miles
- 1,990 locations tested
- 4 major carriers – Verizon, AT&T, Sprint, and T-Mobile
- Results analyzed and published

# Test Results on Interactive Map

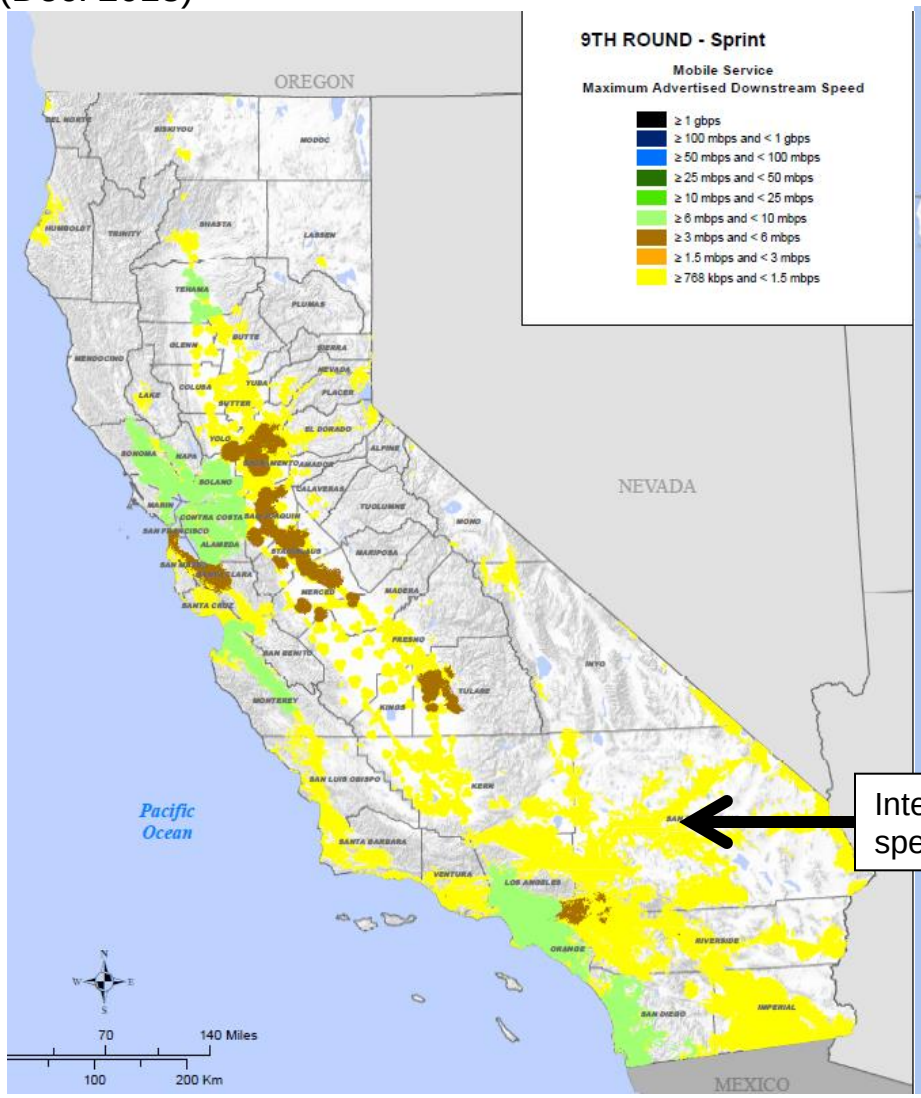


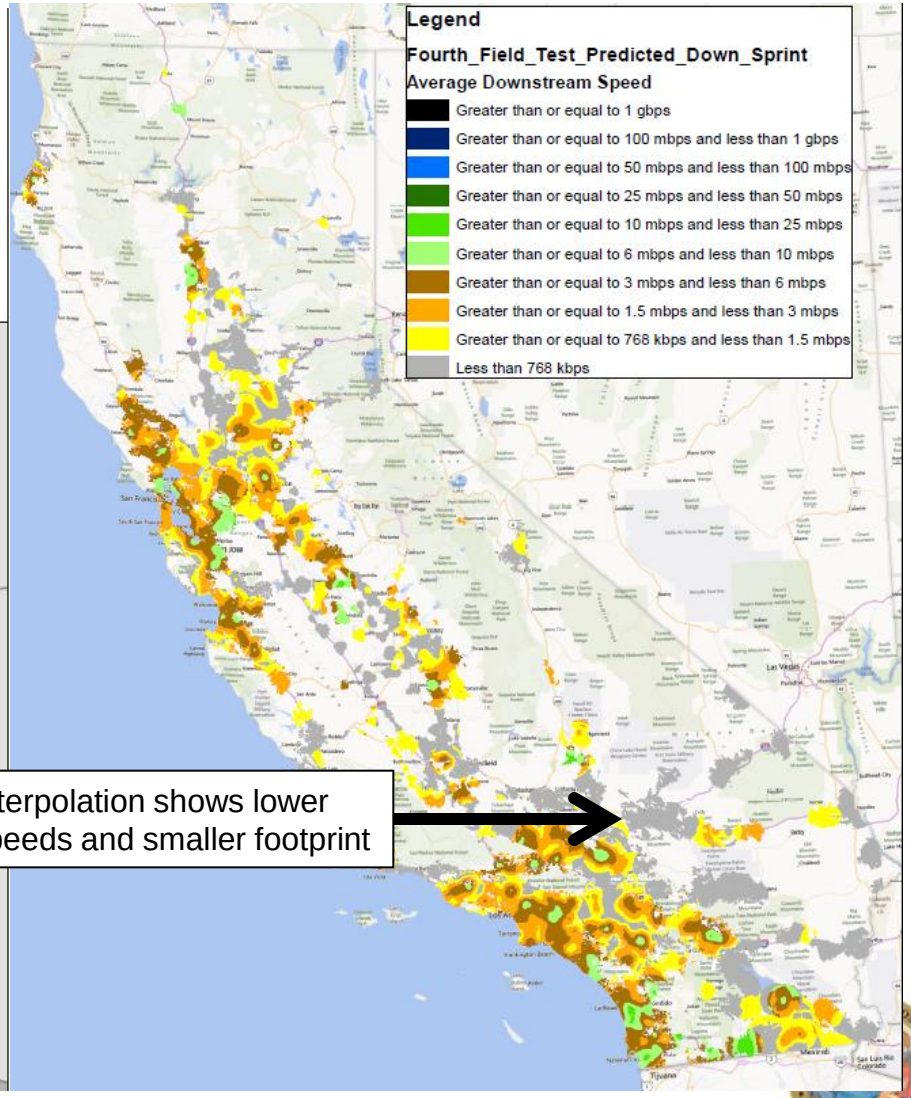

| 2nd Round Average Downstream Speed | |
|---|---|
| Location ID: | 1825 |
| Latitude: | 38.677914 |
| Longitude: | -121.862 |
| AT&T Upstream Speed (kbps): | 6,221.88 |
| Sprint Upstream Speed (kbps): | 859.91 |
| T-Mobile Upstream Speed (kbs): | 161.61 |
| Verizon Upstream Speed (kbps): | 651.91 |
| Average Upstream Speed (kbps): | 1,973.83 |
| AT&T Downstream Speed (kbps): | 15,544.63 |
| Sprint Downstream Speed (kbps): | 1,434.98 |
| T-Mobile Downstream Speed (kbps): | 6.51 |
| Verizon Downstream Speed (kbps): | 1,112.9 |
| Average Downstream Speed (kbps): | 4,524.75 |

| 2nd Round Average Downstream Speed | |
|---|---|
| Location ID: | 1920 |
| Latitude: | 38.527239 |
| Longitude: | -121.9599 |
| AT&T Upstream Speed (kbps): | 1,201.63 |
| Sprint Upstream Speed (kbps): | 222.25 |
| T-Mobile Upstream Speed (kbs): | 73.08 |
| Verizon Upstream Speed (kbps): | 632.6 |
| Average Upstream Speed (kbps): | 532.39 |
| AT&T Downstream Speed (kbps): | 3,014.88 |
| Sprint Downstream Speed (kbps): | 115.72 |
| T-Mobile Downstream Speed (kbps): | 0 |
| Verizon Downstream Speed (kbps): | 1,247.84 |
| Average Downstream Speed (kbps): | 1,094.61 |

Sprint Advertised Downstream Coverage & Speeds (Dec. 2013)

Sprint Field Test Interpolation (Dec. 2013)

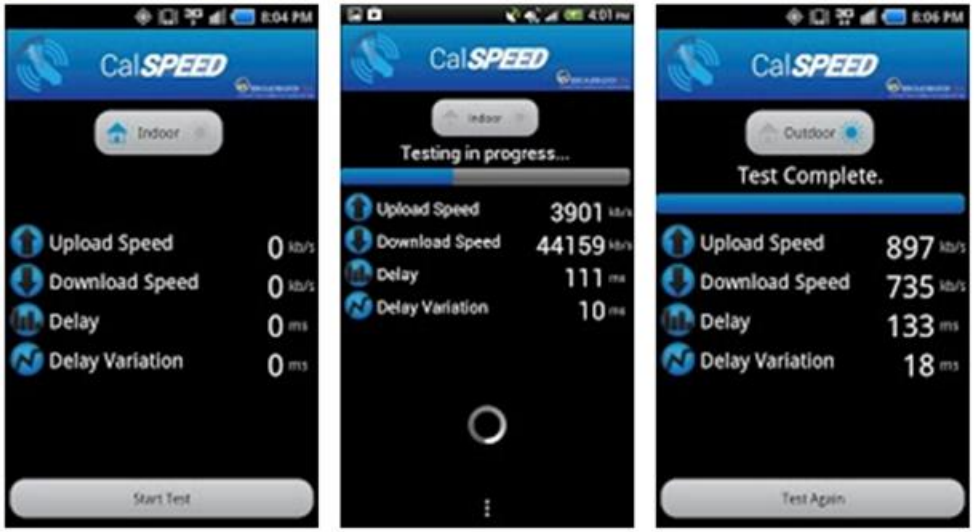



Interpolation shows lower speeds and smaller footprint

# CalSPEED - Crowd Sourced Testing

App Screenshots




Android Phones - download from Google Play – under “CalSPEED”

# CalSPEED for Public Safety?


# Broadband on Tribal Lands

Fixed Broadband Status (June 2013 data) – Wireline and Fixed Wireless Broadband Availability

**By 2010 Census Population**

| Fixed Broadband Status | % 2010 Census Pop | |
|---|---|---|
| Served | 10% | |
| Primarily Served | 44% | |
| Underserved | 5% | 45% |
| Primarily Underserved | 7% | |
| Primarily Unserved | 14% | |
| Unserved | 19% | |

**By % of Total Tribes**

| Fixed Broadband Status | % Tribes | |
|---|---|---|
| Served | 29% | |
| Primarily Served | 6% | |
| Underserved | 11% | 66% |
| Primarily Underserved | 9% | |
| Primarily Unserved | 6% | |
| Unserved | 39% | |

Mobile Downstream Speed Availability (June 2013 data)

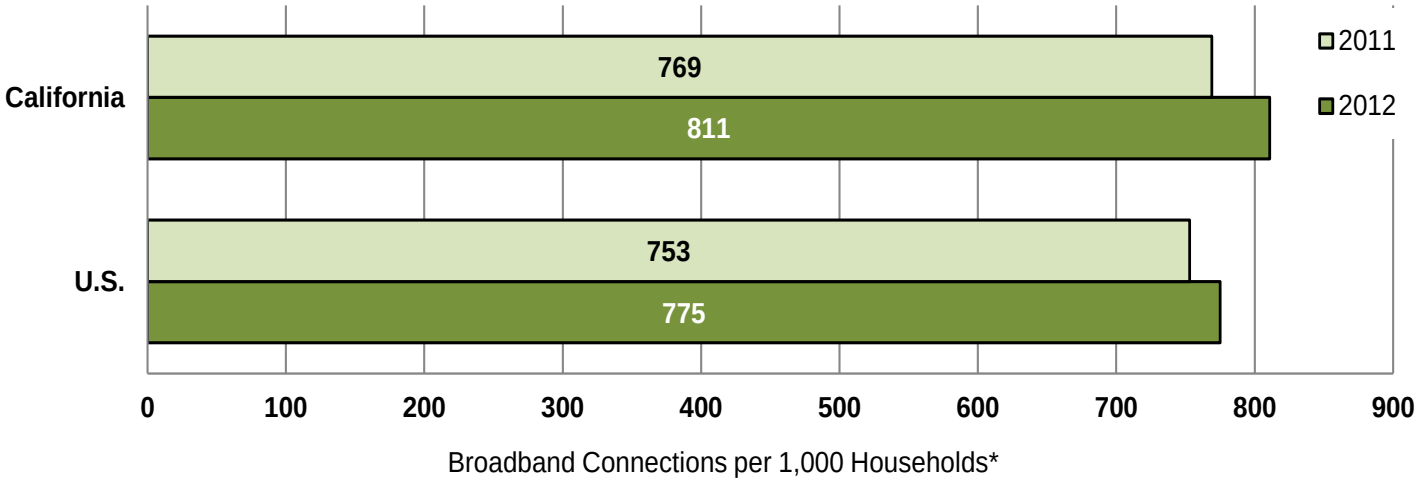
**By 2010 Census Population**

| Mobile Downstream Speed | % 2010 Census Pop | |
|---|---|---|
| Primarily ≥ 6 Mb/s down | 80% | |
| Primarily < 6 Mb/s down | 16% | 20% |
| Primarily < 768 Kb/s down | 4% | |

**By % of Total Tribes**

| Mobile Downstream Speed | % Tribes | |
|---|---|---|
| Primarily ≥ 6 Mb/s down | 53% | |
| Primarily < 6 Mb/s down | 39% | 47% |
| Primarily < 768 Kb/s down | 8% | |

# California vs. United States




Broadband = > 200 Kb/s upstream and 768 Kb/s downstream

# CASF Goals

- Encourage deployment of high-quality advanced communications services to all Californians.
- Provide grants/loans for broadband infrastructure projects in unserved and underserved areas of the state, and grants to regional consortia groups for activities other than broadband infrastructure deployment.
- Senate Bill 740: approve funding for infrastructure projects that will provide broadband access to no less than 98% of California households by December 31, 2015.
- New Public Housing Account established per AB 1299. $25 million funding to be encumbered by December 2016.

# CASF Strategies – 2014 and beyond

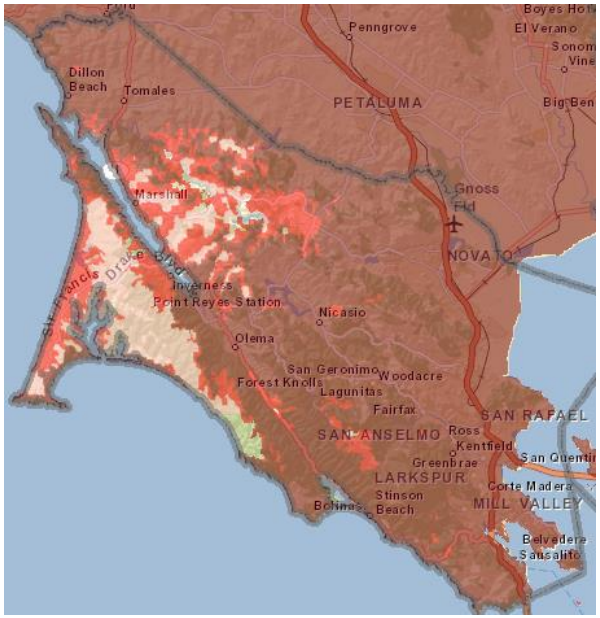
- Engage the regional consortia groups to assist in identifying priority areas for CASF infrastructure grant funding.
- Enhance the accuracy of broadband availability data via customer surveys, mobile speed test apps, and other validation approaches.
- **Resolutions include and call out pubic safety entities that benefit from the infrastructure project**
- Commission to adopt resolution/order with support of regional consortia high priority areas and project solicitation schedule for infrastructure grants.
- Workshops to engage the public housing community stakeholders to design rules for the Public Housing program to be adopted via Commission decision.
- Engage existing broadband providers in resolving broadband availability in target areas, as well as federal, state, and local agencies.

# CASF THUS FAR…as of 10/31/2013

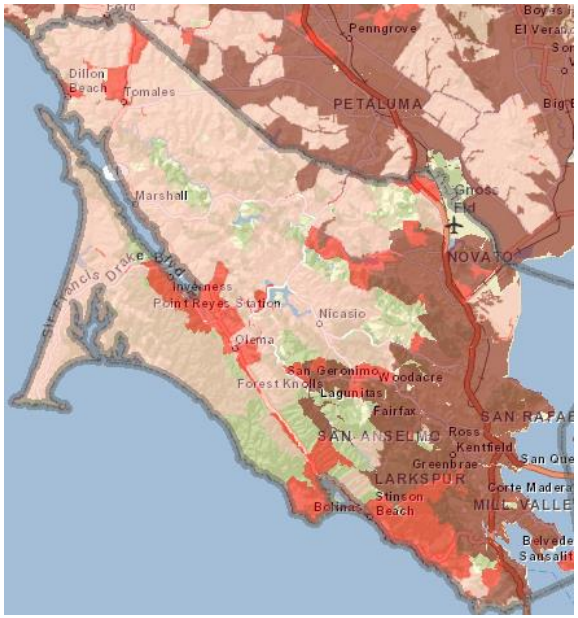
| CASF Accounts | Total Funding* | Encumbered Funds | Description |
|---|---|---|---|
| Infrastructure Grant Account | $270 million | **$78.71 million**: | 40 projects |
| Regional Consortia Account | $10 million | **$8.5 million to 14 consortia over 3 years** | 14 Consortia Groups<br>New round of funding applications due Jan. 17 |
| Revolving Loan Account | $10 million | **$41,000** | One project |
| ***** Broadband Public Housing Account | $20 million (Broadband Deployment)<br>$5 million (Broadband Adoption) | **$0** | |

# Marin County Served Status

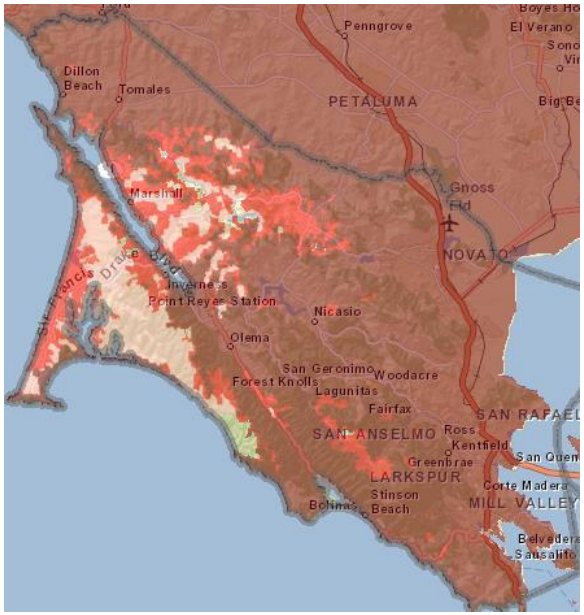
June 30, 2013 - Combined




June 30, 2013 - Wireline




June 30, 2013 - Mobile





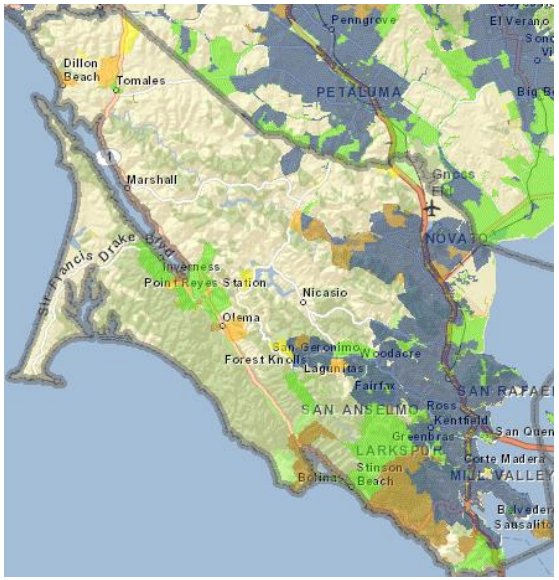
Served

- Served — ≥ 6 megabits per second downstream and ≥ 1.5 megabits per second upstream
- Under-served — < 6 megabits per second downstream or < 1.5 megabits per second upstream
- Un-served — < 768 kilobits per second downstream and < 200 kilobits per second upstream

http://www.broadbandmap.ca.gov/map/

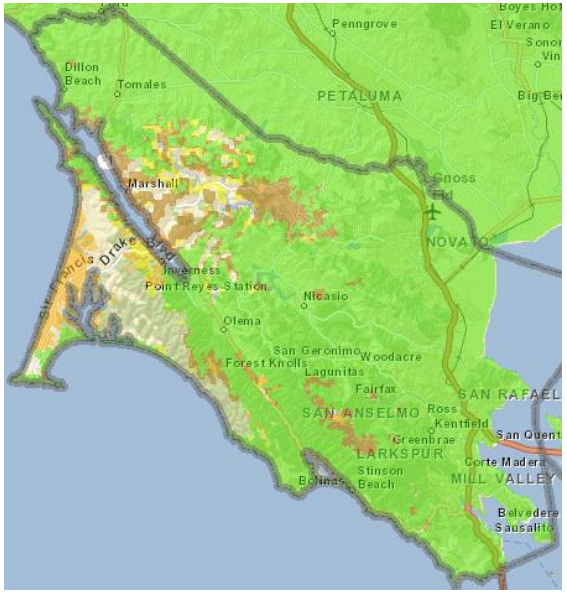
# Marin County Broadband Availability by Technology

June 30, 2013 - Wireline




June 30, 2013 – Fixed Wireless


June 30, 2013 - Mobile




Legend

Maximum Advertised Downstream Speed

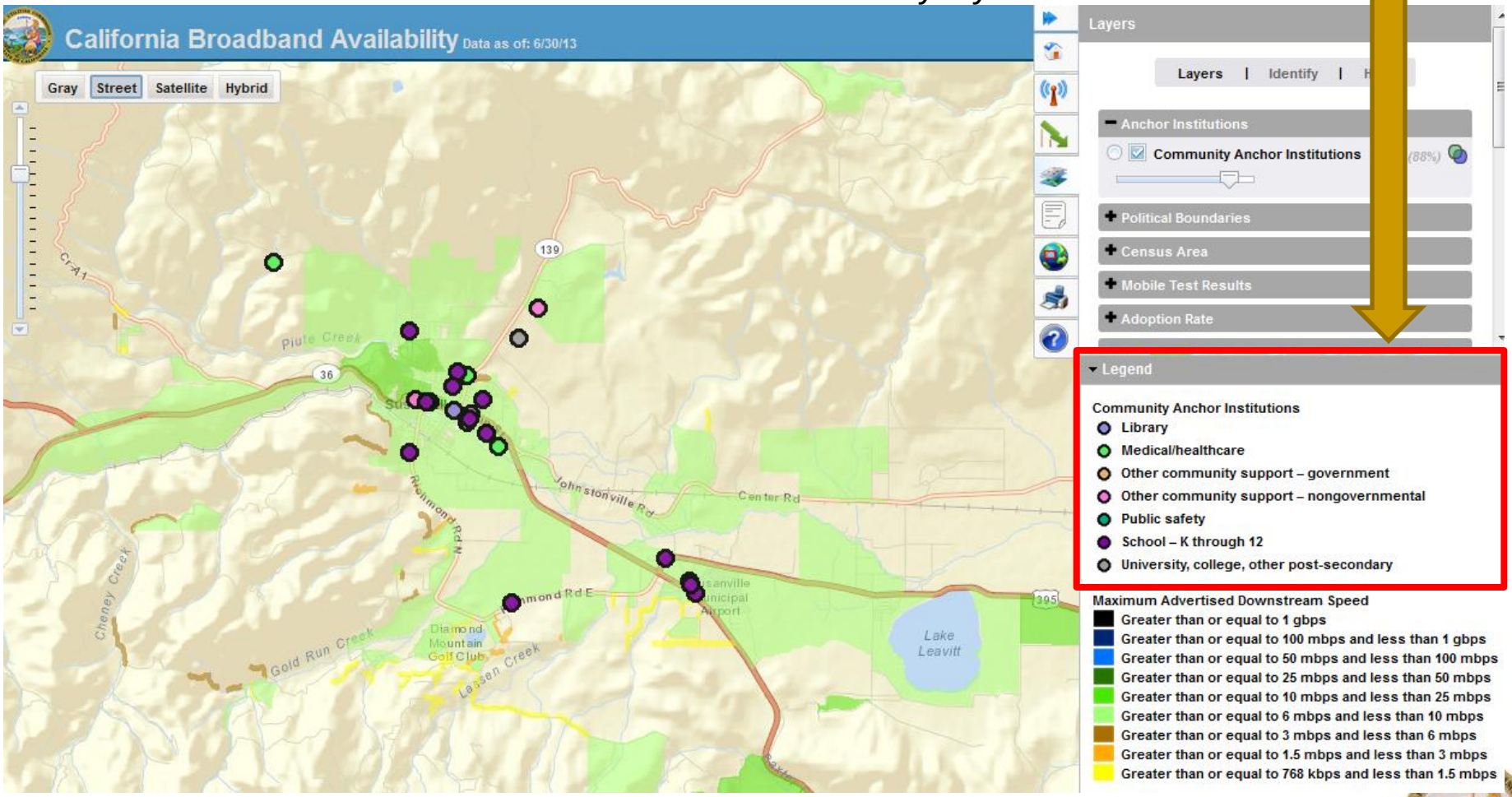
- Greater than or equal to 1 gbps
- Greater than or equal to 100 mbps and less than 1 gbps
- Greater than or equal to 50 mbps and less than 100 mbps
- Greater than or equal to 25 mbps and less than 50 mbps
- Greater than or equal to 10 mbps and less than 25 mbps
- Greater than or equal to 6 mbps and less than 10 mbps
- Greater than or equal to 3 mbps and less than 6 mbps
- Greater than or equal to 1.5 mbps and less than 3 mbps
- Greater than or equal to 768 kbps and less than 1.5 mbps

# California Teleconnect Fund

- Established in 1996 as part of CPUC's universal service program
- Provides 50% discount on select communications services to schools, libraries, hospitals and other non-profit organizations
  - Includes California Telehealth Network
- Funded through surcharge on all customers that purchase intrastate telecommunications services

# Community Anchor Institutions in Map

Susanville area CAIs with wireline downstream availability layer



# APPENDIX

**Penetration and Adoption Rates by County, June 2012**

| County | Households[1] | Households with Fixed Broadband Available | Number of Providers | Residential Fixed Broadband Subscriptions | Adoption Rate | Penetration Rate |
|---|---|---|---|---|---|---|
| California | 12,675,807 | 12,529,217 | 86 | 9,318,958 | 74.4% | 73.6% |
| Alameda | 547,631 | 547,063 | 6 | 423,076 | 77.3% | 77.3% |
| Alpine | 499 | 427 | 4 | 478 | 112.0%[2] | 95.8% |
| Amador | 14,665 | 13,165 | 5 | 9,939 | 75.5% | 67.8% |
| Butte | 88,426 | 87,999 | 5 | 56,324 | 64.0% | 63.7% |
| Calaveras | 19,045 | 16,195 | 6 | 12,559 | 77.5% | 65.9% |
| Colusa | 7,085 | 6,725 | 5 | 3,440 | 51.2% | 48.5% |
| Contra Costa | 378,291 | 378,203 | 7 | 312,087 | 82.5% | 82.5% |
| Del Norte | 9,953 | 9,209 | 3 | See note below | | |
| El Dorado | 70,415 | 64,923 | 9 | 46,877 | 72.2% | 66.6% |
| Fresno | 293,265 | 291,315 | 9 | 171,234 | 58.8% | 58.4% |
| Glenn | 9,957 | 9,716 | 4 | 4,586 | 47.2% | 46.1% |
| Humboldt | 56,376 | 52,218 | 6 | 33,224 | 63.6% | 58.9% |
| Imperial | 49,417 | 47,633 | 5 | 25,774 | 54.1% | 52.2% |
| Inyo | 8,056 | 6,692 | 4 | 4,329 | 64.7% | 53.7% |
| Kern | 258,008 | 250,000 | 9 | 157,736 | 63.1% | 61.1% |
| Kings | 41,595 | 39,515 | 2 | See note below | | |

## Penetration and Adoption Rates by County, June 2012

| County | Households[1] | Households with Fixed Broadband Available | Number of Providers | Residential Fixed Broadband Subscriptions | Adoption Rate | Penetration Rate |
|---|---|---|---|---|---|---|
| Lake | 26,654 | 26,600 | 3 | 15,143 | 56.9% | 56.8% |
| Lassen | 10,069 | 9,189 | 5 | 5,770 | 62.8% | 57.3% |
| Los Angeles | 3,253,919 | 3,248,543 | 14 | 2,330,575 | 71.7% | 71.6% |
| Madera | 43,555 | 42,891 | 6 | 25,424 | 59.3% | 58.4% |
| Marin | 103,404 | 102,375 | 9 | 85,712 | 83.7% | 82.9% |
| Mariposa | 7,786 | 6,324 | 4 | 4,822 | 76.3% | 61.9% |
| Mendocino | 35,145 | 28,623 | 7 | 13,481 | 47.1% | 38.4% |
| Merced | 75,963 | 75,928 | 6 | 38,706 | 51.0% | 51.0% |
| Modoc | 4,094 | 2,221 | 2 | See note below | | |
| Mono | 5,794 | 4,683 | 2 | See note below | | |
| Monterey | 125,305 | 117,708 | 9 | 79,272 | 67.3% | 63.3% |
| Napa | 49,124 | 49,124 | 7 | 35,716 | 72.7% | 72.7% |
| Nevada | 41,707 | 40,513 | 8 | 28,646 | 70.7% | 68.7% |
| Orange | 997,742 | 996,987 | 11 | 831,240 | 83.4% | 83.3% |
| Placer | 134,903 | 132,345 | 15 | 105,090 | 79.4% | 77.9% |
| Plumas | 9,028 | 8,838 | 5 | 5,839 | 66.1% | 64.7% |
| Riverside | 694,405 | 684,931 | 16 | 554,964 | 81.0% | 79.9% |

**Penetration and Adoption Rates by County, June 2012**

| County | Households[1] | Households with Fixed Broadband Available | Number of Providers | Residential Fixed Broadband Subscriptions | Adoption Rate | Penetration Rate |
|---|---|---|---|---|---|---|
| Sacramento | 516,814 | 516,761 | 11 | 374,377 | 72.4% | 72.4% |
| San Benito | 16,999 | 16,174 | 4 | 10,453 | 64.6% | 61.5% |
| San Bernardino | 615,382 | 599,999 | 11 | 450,396 | 75.1% | 73.2% |
| San Diego | 1,094,612 | 1,082,302 | 10 | 903,313 | 83.5% | 82.5% |
| San Francisco | 346,970 | 346,937 | 10 | 262,654 | 75.7% | 75.7% |
| San Joaquin | 216,579 | 216,578 | 5 | 133,952 | 61.8% | 61.8% |
| San Luis Obispo | 102,837 | 97,583 | 7 | 75,178 | 77.0% | 73.1% |
| San Mateo | 259,001 | 257,706 | 10 | 213,894 | 83.0% | 82.6% |
| Santa Barbara | 143,224 | 140,466 | 8 | 100,634 | 71.6% | 70.3% |
| Santa Clara | 610,137 | 609,774 | 10 | 492,036 | 80.7% | 80.6% |
| Santa Cruz | 94,597 | 93,739 | 8 | 65,883 | 70.3% | 69.6% |
| Shasta | 70,769 | 70,458 | 7 | 44,723 | 63.5% | 63.2% |
| Sierra | 1,483 | 1,363 | 5 | 848 | 62.2% | 57.2% |
| Siskiyou | 19,598 | 17,860 | 6 | 7,670 | 42.9% | 39.1% |
| Solano | 143,056 | 143,056 | 7 | 108,129 | 75.6% | 75.6% |
| Sonoma | 186,771 | 184,758 | 9 | 137,067 | 74.2% | 73.4% |
| Stanislaus | 165,477 | 165,430 | 6 | 103,159 | 62.4% | 62.3% |

**Penetration and Adoption Rates by County, June 2012**

| County | Households[1] | Households with Fixed Broadband Available | Number of Providers | Residential Fixed Broadband Subscriptions | Adoption Rate | Penetration Rate |
|---|---|---|---|---|---|---|
| Sutter | 31,524 | 31,524 | 4 | 19,872 | 63.0% | 63.0% |
| Tehama | 23,926 | 23,776 | 7 | 10,778 | 45.3% | 45.0% |
| Trinity | 6,097 | 3,493 | 2 | See note below | | |
| Tulare | 132,171 | 131,292 | 7 | 59,877 | 45.6% | 45.3% |
| Tuolumne | 22,184 | 17,907 | 5 | 11,068 | 61.8% | 49.9% |
| Ventura | 268,392 | 266,787 | 8 | 216,253 | 81.1% | 80.6% |
| Yolo | 70,306 | 70,270 | 8 | 48,371 | 68.8% | 68.8% |
| Yuba | 24,436 | 24,402 | 4 | 14,041 | 57.5% | 57.5% |